

Interview Summary	Application No.	Applicant(s)	
	10/806,671	FOGAL ET AL.	
	Examiner	Art Unit	
	Russell D. Stormer	3617	

All participants (applicant, applicant's representative, PTO personnel):

(1) Russell D. Stormer.

(3) Robert D. Fogal, Sr.

(2) Robert J. Clark.

(4) Robert D. Fogal, Jr.

Date of Interview: 17 May 2005.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: A video was shown to explain the differences between the claimed balancing weight and the Johnson and Pierce weights. The Johnson and Pierce weights were shown to not properly balance a wheel when measured on a spin balancing machine..

Claim(s) discussed: 1,25 and 29.

Identification of prior art discussed: Johnson, Pierce '738, and Pierce '690.

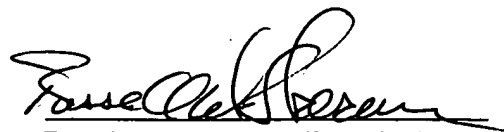
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The differences between the claimed balancing weight and lead weights and the Johnson and Pierce-type weights were discussed. The instant weight is attached similar to a lead weight, but includes the flowable media. The weight includes no lead. The prior art flowable media weights are all attached around most of the circumference of the wheel; while the instant weight is attached to a relatively narrow range. Test data (attached) was provided to show the effectiveness of the claimed weights..

SUMMARY RESULTS

SINGLE-PLANE ACTIVE BALANCING EXTRUSIONS COMPARED TO DUAL-PLANE LEAD WEIGHTS

MAY, 2004

**Dynamometer Fixed-Axle Testing
and
On-Vehicle Dynamometer Testing**

Tire: LT 225/75R16 Firestone Steeltex Radial R4S

Report Prepared by KCF Technologies, Inc. (State College, PA)

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May 10, 2004 – Active Weight Extrusion compared to Dual-Plane Lead Weight Balance on a Fixed-Axle Dynamometer

An experiment was conducted comparing various active weight extrusions to a dual-plane lead weight balance. The experiment was performed on a fixed axle dynamometer test apparatus at the Bridgestone/Firestone Akron Technical Center. The vertical vibration force was measured via a load cell in the fixed axle.

Vibration measurements were taken on a Firestone Wilderness AT P265/75R16 tire with a dual-plane lead weight balance. Then, the lead weights were removed and an active-weight extrusion labeled "O5" (Active-weight extrusion, 3/8" ID with 50% travel with #390 media) was installed on the wheel. In this experiment, the active weight extrusion showed a 77% vibration reduction compared to the dual-plane lead weight balance.

	DUAL-PLANE LEAD BALANCE	ACTIVE WEIGHT EXTRUSION – 3/8" ID 50% TRAVEL - #390 MEDIA	REDUCTION (IMPROVEMENT)
AVERAGE VERTICAL VIBRATION FORCE (N)	34.7	7.8	77%

Figure 1 Active weight extrusion performance vs. dual-plane lead weight balance

Vibration measurements were taken at two speeds; low speed (65 mph) and high speed (75 mph). Also, each speed range was run with a low load (600 lbs.) per tire/wheel and a high load of (900 lbs.) per tire/wheel. Each speed range and load range were averaged.

LL low speed / low load
LH low speed / high load

HL high speed/low load
HH high speed/high load

TEST #1,2 - FINDING THE BEST EXTRUSION DIMENSIONS & MEDIA - TIRE #1

	DUAL-PLANE BALANCE				O1				O2			
VERTICAL VIBRATION (N)	L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H
	27.8	24.4	44.5	41.9	13.2	8.1	18.3	11.4	16.6	11.2	25.4	18.9
AVERAGE												
AVERAGE	34.7				12.8				18.0			

O3				O4				O5				O6			
L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H
16.5	10.9	25.1	19.1	24.3	19.5	33.5	26.6	14.0	7.3	14.2	6.0	27.9	25.2	32.8	27.5
AVERAGE															
17.9				26.0				10.4				28.4			

O5				O6				O7			
L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H	L,L	L,H	H,L	H,H
8.1	3.3	13.0	6.9	21.0	15.6	31.3	25.7				
AVERAGE											
7.8				23.4							

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